

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1-15 are pending in this application. By this amendment, Claim 15 is amended and no claims are canceled or added herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claim 15 was rejected under 35 U.S.C. § 112, second paragraph; Claim 15 was rejected under 35 U.S.C. § 102(a) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,423,875 to Machhammer in view of U.S. Patent No. 6,679,939 to Thiel or U.S. Patent No. 6,727,383 to Nestler; Claims 1, 8-9 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,409,886 to Matsumoto or U.S. Patent No. 6,372,944 to Matsumoto and further in view of Machhammer, Thiel, or Nestler; and Claims 2-7, 10-12 and 14 were indicated as including allowable subject matter.

With respect to the rejection of the claims under 35 U.S.C. § 112, second paragraph, Claim 15 is amended by the present amendment. Accordingly, withdrawal of the rejection of Claim 15 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

The applied art does not teach, disclose or suggest 1) at least “two” spray zones which are spatially successive; 2) condensation space and separating section are within one and the same column; 3) the cooling liquid is condensate taken from the column; and 4) the cooling liquid temperature has to become lower from spraying zone to spraying zone, as similarly recited in the independent claims.

The features recited above provide at least the advantages that no vapor pipe connecting the separating unit and the condensation unit is required. The heat of condensation present in the condensate obtained can generally be removed at a comparatively

high temperature in a first indirect heat exchanger, so that the heat exchanger for the purpose of supercooling the condensate can usually be operated using river water. Alternatively, the withdrawal stream 12 can also be branched off into the heat exchanger upstream of the entry of the condensate withdrawn. Using successive spray zones results in a sharp condensative separation of offgas. As such, the throughput required for this purpose of condensate to be sprayed in the higher spray zones is comparatively low. This is advantageous in that the condensate sprayed in them is usually subjected to a second cooling in the heat exchangers operated with cooling sols to attain the low cooling temperatures. The requirement for sols is in this regard comparatively low. Accordingly, the condensation unit according to the invention can therefore be operated in an energetically favorable manner. Please see the present specification at least at page 5, lines 25 to 28 and page 10, lines 20 to 32.

However, the applied art set forth in the Office Action does not contain all of the features of the independent claims set forth above and therefore cannot provide the advantages set forth above. Specifically, as discussed in Col. 12, lines 15-33 of Machhammer, the hot reaction gas leaving the oxidation stage was cooled to about 160 degrees Celsius in a scrubber by direct contact with quench liquid which was sprayed through slots located in the region of the narrowest cross-section of the tube. Accordingly, Machhammer does not use condensate as cooling liquid but a completely different liquid.

As discussed at page 4, line 25 of the present specification, it is known in the art to have direct cooling. However, as discussed above, all the features recited in the independent claims are not taught or suggested in the applied art. Again, the present invention is directed to providing an improved process for rectificatively separating fluids comprising (meth)acrylic monomers in a rectification column. To this end, the independent claims recite in part, that the process for separating the fluids includes cooling vapor in the condensation space in at least two spray zones, which are spatially successive, by spraying in each spray

zone, supercooled top condensate comprising added polymerization inhibitor, with the temperature of the sprayed supercooled top condensate becoming lower from spray zone to spray zone in the flow direction of the vapor. None of the applied art teaches or suggests all the features discussed above. Thus, for at least the above reasons, Applicant respectfully requests that the rejection of the claims under 35 U.S.C. §103(a) be withdrawn.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application believed to be in condition for formal allowance. A Notice of Allowance for Claims 1-15 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below-listed telephone number.

Respectfully submitted,

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